Fluctuations in Pulse Rates and SpO_2 during Dental Treatment of Crying Children

Kazuhiro SHIMAMURA, Mikihiko YAGI, Hiromi YAMAUCHI and Norihisa AIZAWA

The aim of this study was to assess the effects of dental treatment on the respiration and circulation of crying child patients.

The subjects were divided into the non-crying group (19 child patients) and the crying group (19 child patients).

The pulse rates (P. R.) and percutaneous oxygen saturation (SpO_2) were measured with a pulse oximeter during dental treatment, and the maximum and minimum values as well as the difference between them (Δ) were compared between the non-crying and crying groups.

The maximum P. R. and ΔP. R. of the crying group were significantly larger than those of the non-crying group. The minimum SpO_2 of the crying group was significantly lower than that of the non-crying group, and the ΔSpO_2 of the crying group was significantly larger than that of the non-crying group.

These results suggest that careful observation and pulse oximeter monitoring are necessary during dental treatment of crying children, because their respiration and circulation can fluctuate considerably.

In high-risk cases, general anesthesia may be preferred for dental treatment of crying children.

Key words : crying children, pulse rates, SpO_2

Division of Pediatric Dentistry, Department of Oral Growth and Development, Ohu University School of Dentistry